ABSTRACT OF THE DISCLOSURE

In the present invention a data recovery mechanism used to recover data from failed storage units is used to recover data from failed blocks on storage units.

- To reduce the impact of the read and write operations, multiple redundant blocks are stored on a storage unit. The storage for redundant blocks is rotated among the storage units so that the block storage requirements are balanced. Rotating the redundant block storage among the storage devices may also balance the storage system accesses.

- To recover data when the storage units with the redundant blocks fail, redundant blocks are stored with the latest data block update to reduce the impact of writing the redundant blocks. A redundant block may be a copy of a redundant block to protect against storage unit failures or may be a redundant block generated from blocks on the storage unit using a second error correction code and second stripe structure within the storage unit.